UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISION

Electrification and the Grid of the Future Docket No. AD12-12-000

I. Pre-Conference Statement of Abigail Anthony, Commissioner, Rhode Island Public Utilities Commission

I am pleased to offer these written comments in advance of the Electrification and the Grid of the Future technical conference, to be held on April 29, 2021. These comments are mine solely, and do not constitute a statement of the Rhode Island Public Utilities Commission, the State of Rhode Island, or any other organization or committee that I belong to. I hope that my comments provide the Commission with insights on the experience and role of state utility regulators in advancing heating and transportation electrification, and the complementary roles for the federal government and the Commission.

II. The Electric System Pathway

Today, renewable electric energy is a promising and relatively straightforward way to decarbonize transportation and heating energy use, and thus electrification is likely to be an important and necessary pathway to avoiding catastrophic climate change.

Two things need to be true to motivate consumers to switch to cleaner electric fuel. First, electric vehicles and efficient heating systems need to be affordable at the point of purchase. Second, clean electricity must be no more expensive than necessary to serve demand reliably and adequately. There are many approaches to meeting both conditions, including mechanisms that directly and indirectly recognize the cost of carbon pollution. Regardless of the ultimate framework, the important point is that failure to help consumers adopt clean electric equipment means a slower transition today; failure to control the cost of clean electricity and put it on equal playing field with more polluting energy sources means no transition tomorrow.

III. The Federal Government Should Complement States' Efforts to Transform Markets for Electrified Equipment

The federal government can help states' efforts to accelerate electrification by using its resources and reach to lower the upfront cost of electric vehicles and efficient heating equipment. The federal government can help ensure that policies and programs that send price signals to reduce the carbon intensity of transportation and heating are strong, sustainable, equitable, and predictable enough to induce market transformation and create a smooth, long term, and just demand trajectory for electrified equipment.

With influence over smaller markets, states seeking to aid the transition to cleaner energy struggle to find ways to lower the cost of clean electrification on their own. This is because these

states must collect enough funds to jumpstart the transition to clean electricity, but not so much that they cause migration—and carbon leakage—to other energy systems and jurisdictions that lag behind on fighting climate change. For example, some states have considered raising the funds needed to subsidize electrified equipment by adding charges to the electric bill. This approach might jumpstart the transition, but at scale this funding mechanism is extremely counterproductive because it increases the price of electricity relative to transportation and heating fuels and electricity in other jurisdictions, thus violating the second condition described above. The federal government should find ways to help states accelerate adoption of cleaner transportation and heating equipment while avoiding counterproductive price signals.

IV. State and Federal Regulators Should Focus Utilities on Clean, Efficient Load Growth

It is reasonable to assume that adding load will have the opposite effects of energy efficiency: need for expanded and upgraded transmission and distribution networks, upward pressure on supply costs for all customers, and greater need for clean power resources. Increasing electricity usage, however, could result in lower electricity rates if the fixed costs of the power system are spread over more kilowatt-hour sales—this outcome will help keep electric rates low enough to attract new and cleaner transportation and heating load. But, achieving this outcome requires that new revenue outpaces the cost of serving new demand. The key point is that state and federal utility regulators need to refine utility incentives so that utilities invest just enough to serve new load with clean power, nothing more and nothing less.

Load growth is typically an opportunity for electric utilities to increase their earnings and is always an opportunity for them to expand their business of investing in energy generation and delivery infrastructure. Allowing utilities to run up their rate base or spend more money to deliver carbon-intensive power, however, is not the solution. For ratepayers and society to benefit from electrification, state and federal regulators need to provide thoughtful and judicious incentives that offer the highest rewards for investments that keep the marginal cost of serving new electric load with clean power below the average cost to serve load. This means motivating utilities to explore rates and investments that improve grid flexibility and allow new load to be served without increasing peak demand; investing in transmission when it is the most cost-effective option for meeting new demand and otherwise optimizing the use of resources that avoid costs at the local and regional levels; and looking for ways to lower the cost of statutory programs.

Electrification will hand over a huge market share to electric companies. Investor-owned utilities should share in the benefits of electrification, but they must also take appropriate risk and bear the responsibility of managing the transition—and creation of those benefits—at least cost.

V. Resource Adequacy in a Highly Electrified Future May Require Distributed Resources and Must Require Clean Ones

High levels of electrification, particularly a switch from heating oil to electricity, suggests that resource adequacy becomes a potentially exponentially growing issue. State and federal regulators will need to prepare markets and plan for a new scale and shape of resource adequacy on the power system. Centralized generation and delivery may well be needed to cleanly and reliably

serve new load. Large-scale resource development is lumpy, however, and the Commission and the states should coordinate resources to smooth and right-size the needed investment.

Today, much of the "resource adequacy" for heating customers in my home state, and many other regions, is decentralized. It is largely the responsibility of individuals and small businesses to keep their oil tank full, boilers and furnace maintained, and perhaps purchase a small generator to keep the heat on during a multiday power outage. Electrification at scale centralizes that resource adequacy planning and management at the bulk power system level. We know how that is solved today, and I'd caution planners that it would be pointless and costly to tear out oil and gas boilers and furnaces only to build new oil and gas peaking plants.

A better outcome would be to maintain as much cost-effective distributed resource adequacy as possible during a transition to greater reliance on electricity. This will provide more time to innovate, plan, and implement more centralized resource adequacy solutions if they are necessary. It could also result in a more distributed electric system that provides new benefits and services that do not exist today. Regulators should examine how programs and markets would best allow for distributed electric and non-electric resources to provide clean resource adequacy so they can fairly compete with more centralized solutions. This must include consideration of how distributed resources, like demand response, help keep the lights on and heat pumping at peak, but also could include how electric storage or a tank of clean biofuel can keep ratepayers served even when the bulk system has gone down.

VI. **Conclusions**

Advancing electrification swiftly, efficiently, and sustainably requires that governments and utility regulators take on complementary roles. Government, through policy and administration, should level the playing field for electrification, and undertake measures to make electric vehicles and heating equipment affordable for consumers today and in the future. State and federal regulators should adopt refined financial incentives for utilities that prioritize serving new load with reliable, clean power at the lowest cost.

Respectfully submitted,
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